

LONG ANSWER-I TYPE QUESTIONS

Solve the following systems of linear inequalities.

1. $2 \leq 3x - 4 \leq 5$
2. $-8 \leq 5x - 3 < 7$
3. $6 \leq -3(2x - 4) < 12$
4. $-5 \leq \frac{5 - 3x}{2} \leq 8$
5. $3x - 7 < 5 + x, 11 - 5x \leq 1$
6. $3x - 6 > 0, 5 - 2x < 0$
7. $4x + 9 < 0, 3x - 19 > 0$
8. $x - 3 > 0, 2x + 9 > 5, 3x + 4 < -5$
9. $\frac{x - 4}{7} < 3, \frac{2x + 5}{-3} > 4$
10. $\frac{1 - 7x}{2} > 3, \frac{3x + 8}{5} < -11$
11. $x - 5 \geq 2x + 7, 4x - 9 < x - 11$
12. $3x + 9 < -x + 19, 2x - 5 < 1 - x$
13. $3x - 7 > 2(x - 6), 6 - x > 11 - 2x$
14. $5x + 1 > -24, 5x - 1 < 24$
15. $2(x - 1) < x + 5, 3(x + 2) > 2 - x$
16. $5(2x - 7) - 3(2x + 3) \leq 0, 2x + 19 \leq 6x + 47$
17. $-5 \leq \frac{2 - 3x}{4} \leq 9$
18. $4x + 3 \geq 2x + 17, 3x - 5 < -2$

LONG ANSWER-I TYPE QUESTIONS

Find the solution set of the following systems of linear inequalities:

1. $x \geq 0, y \geq 0$

2. $x \geq 2, y \geq 1$

3. $x + y \leq 9$
 $x \geq 0, y \geq 0$

4. $3x + 4y \leq 12$
 $x \geq 0, y \geq 1$

5. $3x + 4y \geq 12$
 $x \geq 0, y \geq 1$

6. $x + y \leq 3$
 $x \geq 0, y \geq 2.$

LONG ANSWER-II TYPE QUESTIONS

Find the solution set of the following systems of linear inequalities (Q. No. 7-21):

7. $0 \leq x \leq 2, y \geq 3$

8. $0 \leq x \leq 4, 0 \leq y \leq 3$

9. $x + y \leq 6, x + y \geq 4$

10. $x + y > 4$
 $2x - y > 0$

11. $2x + y \geq 8$
 $x + 2y \geq 10$

12. $2x - y > 1$
 $x - 2y < -1$

13. $4x + 3y \leq 60$
 $2x - y \leq 0$
 $x \geq 3, x \geq 0, y \geq 0$

14. $x - y \leq 2$
 $x + 2y \leq 8$
 $x, y \geq 0$

15. $x - y \geq 0$
 $3x - y + 3 \leq 0$
 $x, y \geq 0$

16. $3x + 5y \leq 15$
 $5x + 2y \leq 10$
 $x, y \geq 0$

17. $2x + 3y \leq 6$
 $x + 4y \leq 4$
 $x, y \geq 0$

18. $3x + 4y \leq 60$
 $x + 3y \leq 30$
 $x \geq 0, y \geq 0$

19. $4x + 3y \leq 60$
 $y \geq 2x, x \geq 3$
 $x \geq 0, y \geq 0$

20. $3x + 2y \leq 150$
 $x + 4y \leq 80$
 $x \leq 15, x \geq 0, y \geq 0$

21. $x - 2y \leq 3$
 $3x + 4y \geq 12$
 $x \geq 0, y \geq 1.$